

## CLAIMS

1. A pixel and in-pixel memory for a display device, comprising:  
a pixel display electrode (27);  
5 one or more magnetoresistive random access memories, MRAMs (60, 62), for storing a drive setting;  
a read-out circuit (64) coupled to the one or more MRAMs (60, 62);  
a drive circuit (26) coupled to the read-out circuit (64) and the pixel display electrode (27) for driving the pixel display electrode dependent upon  
10 the read-out drive setting with drive current that does not pass through the one or more MRAMs.
2. A pixel and in-pixel memory as claimed in claim 1, wherein the drive circuit comprises a transistor (79) coupled to a voltage reference (58) and  
15 arranged to control flow of the drive current from the drive circuit to the pixel display electrode.
3. A pixel and in-pixel memory according to claim 1 or 2, further comprising a switching device (24) arranged to switch according to received  
20 display data, and a bit line (45) running from the switching device to the voltage reference via one end of each of the one or more MRAMs.
4. A pixel and in-pixel memory according to any preceding claim, wherein the read-out circuit (64) comprises a flip-flop circuit.  
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5. A pixel and in-pixel memory according to claim 4, comprising two MRAMs, and the flip-flop circuit comprising two inputs, each of the two MRAMs being coupled to a respective one of the flip-flop circuit inputs.
- 30 6. A display device comprising a plurality of pixels and in-pixel memories each according to any of claims 1 to 5.

7. A display device according to claim 6, comprising a liquid crystal layer for driving by the pixel display electrodes.